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POTENTIAL FEASIBILITY OF CONTRACTOR SELF-OVERSIGHT IN THE SELF-REPORTING OF DELIVERY DELAYS

by

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With dwindling personnel resources, there is growing concern over contract management policies within the DoD as well as questions as to how to improve contract management efficiency. Defense Contract Management Command (DCMC) is responsible for performing the majority of contract administration services once a contract has been awarded. Contract delivery surveillance is an extremely important tool in monitoring production of an end item and notifying customers of potential delivery delays. Unfortunately, DCMC personnel available to perform contract delivery surveillance have not increased proportionately to the contract work load. This study examines the feasibility of contractor self-oversight and self-reporting of delivery delays. DCMC's current contract delivery surveillance practices and procedures are presented and analyzed for effectiveness in notifying the customer of delays. Two case studies on contractor delay self-forecasting are also analyzed. The study reveals that there is potential for successful contractor self-oversight and reporting of delays. As more data becomes available, a cost benefit analysis of contractor self- oversight and reporting is recommended.

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POTENTIAL FEASIBLITY OF CONTRACTOR SELF-OVERSIGHT IN THE SELF-REPORTING OF DELIVERY DELAYS

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ABSTRACT

With dwindling personnel resources, there is growing concern over contract management policies within the DoD as well as questions as to how to improve contract management efficiency. Defense Contract Management Command (DCMC) is responsible for performing the majority of contract administration services once a contract has been awarded. Contract delivery surveillance is an extremely important tool in monitoring production of an end item and notifying customers of potential delivery delays. Unfortunately, DCMC personnel available to perform contract delivery surveillance have not increased proportionately to the contract work load.

This study examines the feasibility of contractor self-oversight and self-reporting of delivery delays. DCMC's current contract delivery surveillance practices and procedures are presented and analyzed for effectiveness in notifying the customer of delays. Two case studies on contractor delay self-forecasting are also analyzed.

The study reveals that there is potential for successful contractor self-oversight and reporting of delays. As more data becomes available, a cost benefit analysis of contractor self-oversight and reporting is recommended.

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I. INTRODUCTION

A. RESEARCH INTENT

In today's era of force reduction and diminishing resources, it is paramount that the Navy find ways to improve efficiency and productivity while maintaining readiness. The Defense Contract Management Command (DCMC) is a major element of the Defense Logistics Agency. DCMC is responsible for managing over 350,000 prime contracts per fiscal year, with a value exceeding $800 billion.

Once a contract has been awarded, one of DCMC's many jobs is to monitor contractor progress. DCMC policy is to anticipate delivery delinquencies by analyzing surveillance data and reporting the indicated status to the customer prior to the scheduled delivery date. The objective of production surveillance is to provide buying activities with critical knowledge concerning progress so they may exercise contractual options and ensure the Government takes timely and appropriate action. Production surveillance comprises about 5% of DCMC's almost billion dollar budget.

The Revised Delivery Forecast (RDF) process is the primary tool for notifying the customer of delinquencies in delivering items. RDFs provide the purchasing office with timely automated information concerning delays in the contract delivery schedule.

The purpose of this research is to examine the feasibility of motivating contractors through formalized agreements to self-report real or potential delays in product delivery. Self-oversight and self-reporting would replace direct technical surveillance by DoD personnel. This thesis focuses on the primary and subsidiary research questions set forth below:

Primary: Is contractor self-oversight and self-reporting of product delivery delays a feasible option in lieu of direct technical surveillance by DCMC personnel?

Subsidiary:

(1) How successful is the RDF process in detecting production delays and forecasting problems significantly in advance?

(2) What are the most frequent causes for delays in the production schedule, and who is responsible for them?

(3) What are the successful elements of current self-oversight and self-monitoring programs such as the Process Oriented Contract Administration Services (PROCAS) program which involves tailoring Government oversight based on evaluation of critical manufacturing processes?

B. BACKGROUND

As the DoD continues to face force and budget reductions, DCMC is tasked with exploring opportunities that will provide maximum supportability subject to resource constraints. Contract management is an important part of military logistics, and it has a direct impact on mission success. Initiatives that can significantly increase efficiency, without risk to mission capability and success, are worth investigation.

The Department of Defense has already sought to reduce cost without sacrificing readiness, such as with PROCAS. This initiative teams government and contractors in a professional relationship to identify and improve critical processes and ensure successful contract completion. PROCAS focuses on identifying a teaming arrangement between the contractor, military customer, DCMC and other government agencies such as Defense Contract Audit Agency (DCAA). The teaming agreement can be either formal, with a written, signed document, or informal, sealed with a handshake. [Ref 1:p.8]

PROCAS has had some success in reducing contract surveillance efforts. For example, it cut invoice processing time at Magnavox by 80%. Basically, team members identify process improvements that will reduce government surveillance without compromising government interests. PROCAS examines

many processes involved in efficiently and effectively administering contracts.

Production surveillance and reporting is an important area to monitor. Overall responsibility for surveillance of each contractor will be assigned to an Industrial Specialist (IS). Although the IS has overall responsibility for surveillance, the Procurement Technician (PT) often performs most of the surveillance activity.

The IS has to anticipate production problems, to assure corrective actions and to recommend preventive actions in order to assure that the customer is aware of all events that could bear on a contractor's ability to meet contractual requirements. The using and buying activities need to be aware of forecasted and actual delays in production schedules. Approximately 70% of all contracts meet production schedules; the rest are delayed.

C. SCOPE OF THESIS

The study will be divided into two major parts. First, it will evaluate current DCMC management practices at the Defense Contract Management Command. Second, the research will determine the elements and conditions necessary for contractor self-oversight. The research will conclude by determining whether self-oversight and self-reporting has the potential to improve contract management effectiveness.

D. METHODOLOGY

Information regarding contractor self-oversight and applications to production surveillance (specifically to RDFs) was obtained through published literature, case studies, and DCMC monthly status reports. General Accounting Office and Office of Inspector General reports concerning production surveillance and contractor self-oversight were examined. Sample contractor schedule forecasts were also collected and examined to determine their accuracy.

Finally, the conditions that need to be in place for contractor self-oversight and self-reporting will be identified to determine the potential benefits of contractor self-oversight and self-reporting to DCMC and DoD.

E. ORGANIZATION

There are four remaining chapters. Chapter II provides historical background on Government contractor self-oversight programs. Chapter III examines current DCMC contract delivery surveillance procedures. Chapter IV provides: (1) an examination of the effectiveness of the RDF process, (2) two selected contractor case studies in the self-reporting of delays, and (3) positive elements of past Government self-oversight successes. Chapter V contains a summary of the thesis, conclusions and recommendations.

II. BACKGROUND

A. INTRODUCTION

This chapter will provide background on DCMC, and a brief history of previous and current contractor self-governance programs. This chapter will end by describing the Mechanization of Contract Administration Services and how the Revised Delivery Forecast portion can be used to promote contractor self-oversight.

B. DCMC BACKGROUND

The Defense Logistics Agency (DLA) furnishes material support and services to the military. DLA also supports material procurement by administering contracts after they are awarded by defense agencies or individual services. Prior to 1990, contract administration was conducted by DLA's Defense Contract Administration Services (DCAS). [Ref 2:p.3] In June 1989, Secretary of Defense Cheney recommended making improvements to the Defense acquisition process. One of the recommendations was to consolidate all contract administration functions performed in both DLA and the various military departments. The purpose of this consolidation was stated in Mr. Cheney's address to Congress:

> The consolidated management of contract administration will provide uniform procurement policy, permit the upgrading in the quality of the CAS work force, reduce overhead and payroll costs.

> The consolidated management will also permit the CAS structure to be streamlined from nine regions into five districts. [Ref 3:p.11]

On 26 February 1990, DCMC was formed and charged with DoD-wide contract management support, engineering and program support, quality assurance, and contractor payment activity.

DCMC's mission is to administer Defense Contracts for the military services, other Department of Defense Components, Federal Civil Agencies and, when authorized, to Foreign Governments. DCMC's mission elements are:

* To assure contractor compliance with cost, delivery, technical, quality, and other terms of the contract,
* To accept products on behalf of the Government,
* To pay the contractor, and
* To provide program support. [Ref 3:p.11]

In 1990, DCMC was originally divided into five geographic districts within the United States and one district for international contracts. These districts included: West, South, Mid-Atlantic, Northeast, North Central, and Dayton for international contracts. [Ref 3:p.12] At the time it was established, DCMC maintained a work force of approximately 25,000 people.

Each district contained many field offices. These field offices were and still are comprised of Defense Contract Administration Offices (DCMAO), Defense Plant Representative

Offices (DPRO), and Defense Contract Administrative Offices (DCMO).

DCMAOs are responsible for a defined region that contains contractors with small to medium size Government contracts. DCMAOs administer their contracts from a central office. DPROs are established at the site of large contractor plants and are responsible for administering all contracts maintained by the contractor. Also located at the contractor's plant are DCMOs which differ from DPROs in that they report to a DCMAO and they may not have the capability to perform the full range of contract administrative services. [Ref 4:p.17]

In a 1994 memorandum to the Secretaries of the Military Departments, Secretary of Defense, Dr. William J. Perry, again addressed the need for acquisition reform. In the memorandum, he stated:

> The Department of Defense (DoD) faces unprecedented challenges in preserving force effectiveness in light of a radically changed threat, substantially declining defense budgets, and rapidly changing technology. The existing acquisition system will not be, and in some cases already is not, capable of responding to customer needs in this new environment. The fact is-the world in which DoD must operate has changed beyond the limits of the existing acquisition system's ability to adjust or evolve-it must be totally reengineered.[Ref 5:p.1-2]

DCMC quickly experienced the reality of Secretary Perry's statement, with cuts in its personnel and budget. By 28

January 1996, the remaining Southern District Headquarters workload had been transferred to districts East and West. [Ref 6:p.6] What had begun as five major districts had dwindled down to two with the international contracts still being administered by the Dayton office. DCMC's work force had decreased from 25,000 to 16,000. [Ref 7]

To provide quality goods and services with an ever declining work force, DCMC developed a new philosophy, entitled Performance Based Management (PBM). This philosophy developed from a program by the same name that evaluated contractors' risk assessment efforts. [Ref 7] This philosophy linked contractor performance with the appropriate level of contract administration surveillance. Simply put, PBM placed the right people in the right place at the right time, doing the right thing. PBM was built on the positive aspects of past successes. [Ref 8:p.A-5] Fundamental to the PBM philosophy was seeking programs, such as contractor self-oversight initiatives, that encourage the Government and the contractor to work as a team to mitigate the effects of diminishing personnel and resources.

DCMC was faced with balancing the risk associated with reducing oversight against the Government costs to ensure compliance. Thus, seeking other means of maintaining contract coverage became essential. One of the possibilities DCMC

examined to alleviate the continuing reduction in force was to promote more contractor self-governance programs.

C. BACKGROUND ON SELF-GOVERNANCE PROGRAMS

One of the Government's first attempts to increase cost-effectiveness with industry was the Contractor Risk Assessment Guide (CRAG) Program. Basically, the program invited contractors to assess their internal controls on a voluntary basis. If contractors could demonstrate that they had implemented internal control systems that met CRAG control objectives, they could potentially receive less Government oversight. [Ref 3:p.9]

The program was jointly developed by the Under Secretary of Defense for Acquisition, the Inspector General, DoD, the Director of the Defense Contract Audit Agency, and the defense industry. The program was approved and published by the Government in 1988. The goals of the program were to strengthen contractor internal controls through self-governance and increase the efficiency and effectiveness of DoD's oversight effort.

Unfortunately, the program encountered a variety of problems. At the time, the Government maintained an adversarial relationship with the defense industry. In addition, many contractors failed to see any benefits from the

CRAG program. It did not allow additional overhead funds to enhance internal controls. [Ref 3:p.9]

Prior to the CRAG program, DCMC developed the Contractor Quality Assurance Program (CQAP) to address customer dissatisfaction with the growing number of in-stock nonconforming parts. This program focused on defect detection. Unfortunately, CQAP promoted a "policeman" mentality because it concentrated on inspecting the products for conformance and emphasized identifying and managing defects.

The Government realized setting inadequate requirements that lacked the necessary emphasis on building quality into every process effecting design, manufacturing, and distribution also leads to a high concentration of products that are of poor quality. [Ref 9:p.18] Recognizing these shortcomings, CQAP evolved into the In-Plant Quality Evaluation Program (IQUE). This program espoused the same ideals but instead centered on defect prevention. [Ref 10:p.7]

The IQUE Program recognized that if contractors adopt self-governance through Total Quality Management (TQM) practices, it can reduce Government oversight. [Ref 11:p.13] Thus, with the ever increasing workload and diminishing personnel resources, DCMC established IQUE in its move toward contractor self-governance.

IQUE was designed to assess whether the contractor's processes were able to consistently satisfy the contract requirements. IQUE focused on assuring that the contractor could accurately and effectively transform inputs into products. [Ref 13:p.13]

The IQUE Program's biggest benefit was the improved channels of communication between the Government and contractors. In addition, IQUE was instrumental in shifting the focus away from the end product onto the production process. [Ref 10:p.7] Although IQUE improved the working relations between the Government and the contractor, the program did not improve the contractor's processes; it only identified processes that were out of control and how to potentially fix them.

The latest in the long line of contractor self-governance programs is PROCAS. PROCAS has now usurped IQUE as DCMC's way of doing business. [Ref 12] The initial elements of PROCAS were formed by combining IQUE and the best of the military services' quality self-governance programs. (PROCAS THESIS p.12.) Like IQUE, PROCAS determines which processes are high or low risk. However, it also looks at ways of improving the contractor's operational process or processes. It is important to note that DCMC personnel can only recommend

changes to the process. The contractor cannot interpret suggestions as orders or constructive changes to the contract.

PROCAS combines the common features of the most successful contract administration techniques and approaches, including:

* process orientation vs. end item accept or reject,
* teaming in lieu of adversarial relationships, and
* identification of objective measures of performance rather than Government inspections.

Implementing PROCAS means that teams are formed around processes that are critical to the contractor's operation. The teaming aspect unites DCMC, the customer, the contractor, and DCAA, and focuses their efforts on continuous process improvement. [Ref 8:p.A-3]

The process team examines the process and develops metrics to analyze, adjust and improve the process within the boundaries of the teaming agreement. The teaming agreement can be formal, with a written, signed document or informal with a handshake. It is important to note that this agreement does not change the terms and conditions of the contract. [Ref 1:p.8] The agreement allows the Government and industry to jointly emphasize teamwork and continuous improvement. [Ref 3:p.32]

DCMC is currently using PROCAS to determine the appropriate level of oversight to provide. However, DCMC's

philosophy of Performance Based Management encourages them to continuously improve their ability to provide their customers outstanding contract management support.

D. BACKGROUND ON CONTRACTOR SELF-REPORTING OF DELAYS

Production surveillance requires tremendous human and financial resources to manage properly. It involves four primary activities:

* Review Contract,
* Develop Surveillance Plan,
* Perform Surveillance, and
* Perform Corrective Action as Necessary.

After reviewing the contract, the appropriate surveillance is determined by the criticality designator assigned by the purchasing office. The team leader in charge of the contract documents the surveillance level in a surveillance plan. [Ref 13]

Surveillance should provide the continuous status of contract line item deliveries and associated problems. This ensures that the contractor's control systems and corrective actions are adequate and in compliance with contract requirements. In addition, the plan identifies both the surveillance to be provided on the contract and the information needed for an RDF when the production schedule of a line item is delayed. When the information is compiled, the

RDF is entered into the Mechanization of Contract Administration Services (MOCAS) data base.

MOCAS is an internal DCMC system designed by DLA to implement and respond to the Military Standard Contract Administration Procedures (MILSCAP). In addition, this automated data system provides management and operational data on delivery schedules, shipments, contractual changes, and disbursements to contractors.

When a contract is awarded, the Procuring Contracting Officer (PCO) always distributes hard copy contracts and modifications to the contractor, Administration Office, and Payment Office. Sometimes, the contract and PCO modification data is also transmitted electronically from PCO computer to DCMC's MOCAS system. The MOCAS data base is separated into five main categories for each contract:

* Inventory Data - status of the document,
* Administrative and Address Data - type contract, contractor data,
* Accounting and Provisions Data - funding and payment limitations,
* Line Item and Schedule Data - quantities due and dates, and
* Shipment Data - shipments at line item level.

Previously, when DCMC learned that an item might be delinquent by telephone inquiry or official inspection, the

DLA Form 1654, Delay in Delivery, was generated. In 1987, an enhancement was made to MOCAS's line item and schedule data to automatically transmit RDFs. These notices are generated by the Industrial Specialist and Procurement Technician providing forecasted recovery dates. They are endorsed by the Administrative Contracting Officer (ACO) with a recommended action to the PCO. [Ref 14:p.I-5]

With DCMC's drawdown in personnel and resources, they must find alternative ways to perform production surveillance. The number of personnel is decreasing significantly without an equivalent decrease in workload. DCMC has initiated a pilot program to test motivating contractors through formalized agreements to self-report real or potential delivery delays in lieu of direct DCMC technical surveillance.

E. CHAPTER SUMMARY

With the drawdown in personnel, DCMC is forced to seek alternative methods of providing the necessary contract administrative services. One solution is contractor self-oversight. Under the Performance Based Measurement philosophy, DCMC strives to continually improve the way it conducts business. As evidenced above, contractor self-oversight programs have evolved to incorporate new and better management techniques.

Contractor self-reporting of delays presents another potential way for DCMC to reward proven reliable contractors and channel DCMC's limited personnel to other areas that require more attention and surveillance.

The following chapter will address DCMC's current production management practices.

III. CURRENT DCMC CONTRACT DELIVERY SURVEILLANCE PRACTICES

A. INTRODUCTION

This chapter will describe current DCMC practices regarding production surveillance and the RDF's role in the process. First, RDFs will be defined and then the use of RDFs by the buying activity and DCMC will be discussed. In addition, the procedure for initiating an RDF will be depicted. Finally, this chapter will address the changing cultural climate of DCMC and how this will affect the RDF process.

B. BACKGROUND ON RDFs

RDFs are essential for reporting product assurance and production status to DCMC customers. They notify customers of potential or real delays, forecast probable delivery dates, and code the reason for delay. [Ref 15:p.6-2] This type of notification is critical so that customers may either exercise contractual options or adjust their resources to meet alternative requirements, rather than holding money for a delivery that is delayed.

RDFs are an automated program within the MOCAS data base for reporting delays in delivery. Depending on the contract clause requirements, RDFs can be used in lieu of the hand typed DD Form 375-2 Delay in Delivery Report. The needs of

the purchasing activity determine which form of notification will be used. RDFs can be sent via two methods, routable and nonroutable, depending on the customer's capability or preference.

If the RDF is nonroutable, the MOCAS program displays a second screen on the computer which allows the Industrial Specialist (IS) or Procurement Technician (PT) to create narrative information. [Ref 15:p.6-2] Nonroutables occur when there is no match in the MOCAS data base for the buying activity's Department of Defense Activity Address Code (DoDAAC). This occurs if the activity's DoDAAC code does not exist within the MOCAS data base. The MOCAS system then generates a form similar to the DD Form 375-2 that can be mailed to the buying activity in question. The DD Form 375-2 is still used today; it is a hard copy delay notification which allows for a more extensive narrative. [Ref 16:p.3]

If the MOCAS system finds a matching DoDAAC code, the RDF is routable. Once determined routable by the MOCAS system, no narrative information is allowed and the RDF is transmitted directly from the DCMC computer to the buying activity's computer. The buying activity will receive a three digit alphanumeric code indicating the cause for delay.

Generally, an RDF will contain the following information:

* DCMC activity issuing the RDF,
* Buying activity's contract number,
* Line item number and quantity being delayed,
* Revised Delivery Date,
* Reason for delinquency, and
* DCMC commentary if applicable.

Although the RDF contains only basic information, it still remains a vital tool for the buying activity to assess contractor performance.[1] Two other reports affect the RDF process: 30/60 Day Advance Delivery Alert, Contractor Inventory Delinquency Report (CIDR).

The 30/60 Day report displays all contracts with a category 2 surveillance that are scheduled for delivery within the next 1 or 2 months after the report month. There are two types of surveillance which are divided into categories 1 and 2. The differences between the two types of surveillance will be discussed in more detail later in this chapter. The Industrial Specialist, or Procurement Technician uses this report to monitor these contracts and determine whether an RDF should be sent out.

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[1]DCMC Policy Letter No. 96-4 dated 1 April 1996 directed commands to use alternate methods of reporting delivery status in place of RDFs until the new ALERTS delivery status software program installation is complete.

The CIDR lists all contracts delinquent over 30 days and records all RDFs that were issued for each delinquent contract. It is an important tool in assessing whether DCMC personnel have been notifying customers of delinquencies in a timely fashion.

C. PRODUCTION SURVEILLANCE AND RDF INITIATION PROCESS

1. CONTRACT RECEIPT

When a contract is received for administration, DCMC is authorized to perform numerous functions (Figure 1). One of its many responsibilities involves production support, surveillance, and status reporting. This includes timely reporting of potential and actual delays in contract delivery schedules. Under the realm of production surveillance, DCMC reviews the contract and analyzes the contractor's performance plans, schedules, controls, and industrial processes to determine how much surveillance to perform. [Ref 17:p.42-15]

Administrative Contract Office (ACO) teams are formed to establish surveillance plans. They consist of DCMC personnel with different specialties. The teams assess new contracts and evaluate contract modifications to develop surveillance plans or to determine necessary adjustments to existing surveillance plans. [Ref 18] During the contract review

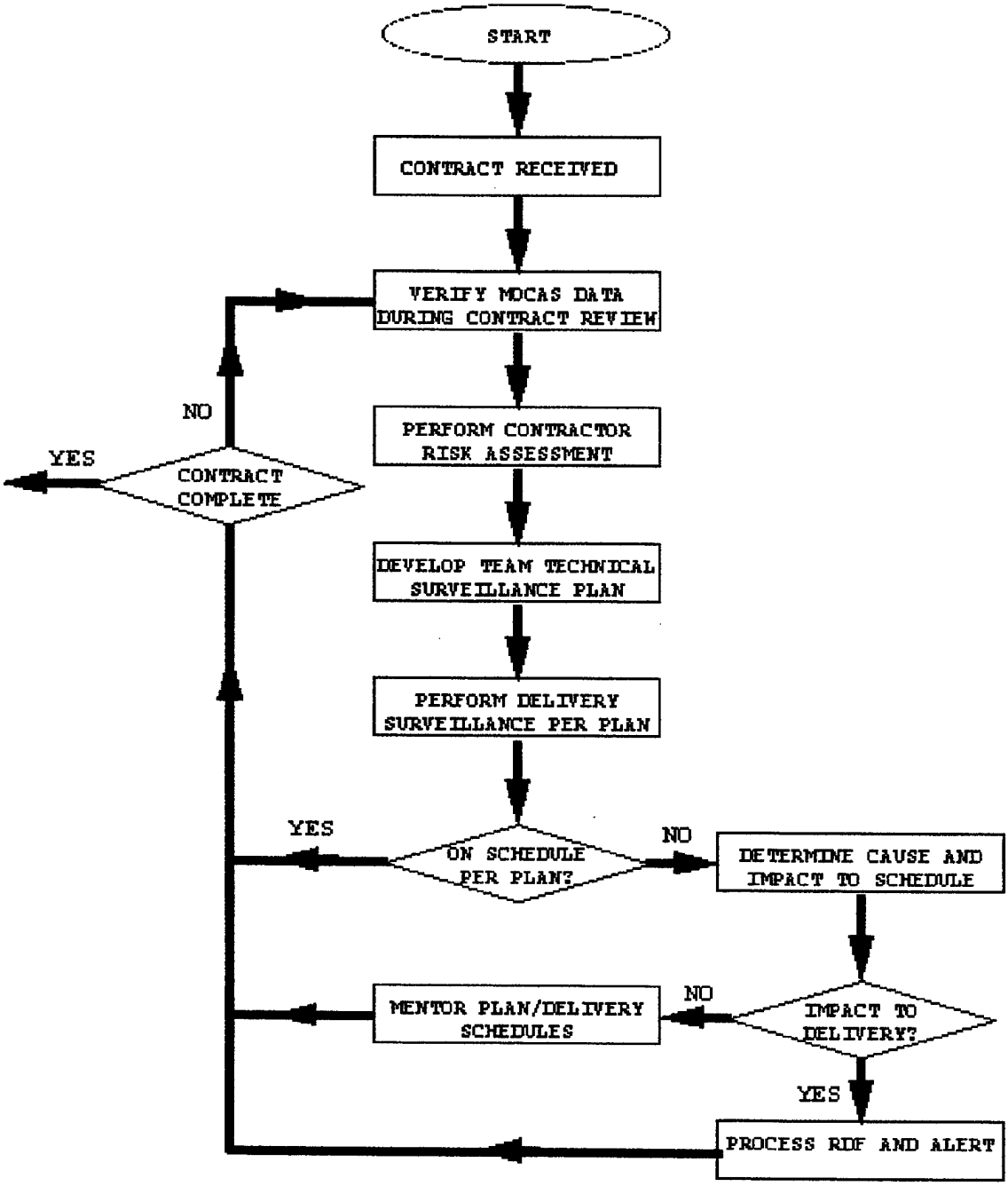


Figure 1.

Contract Delivery Surveillance Flow Chart

process, each team member completes a contract review checklist according to his or her field of expertise. For example, the Industrial Specialist and Procurement Technician will complete a checklist based on production whereas an Industrial Engineer will complete one based on engineering.

2. MOCAS DATA VERIFICATION

The Defense Finance Administration Services (DFAS) provides finance and accounting services for the DoD. The DFAS center located in Columbus, Ohio is responsible for paying all major contracts managed by DCMC using the MOCAS system. DFAS reviews each incoming contract and extracts data for the MOCAS data base.

While DFAS performs this function, the ACO team receives, distributes, and corrects contracts within MOCAS. Once the actual contract is received, it should be compared with the contract abstract, and any errors should be promptly corrected. [Ref 19:p.21-1] In particular, it is essential that the IS compare the actual contract to the abstract to check the accuracy of line item quantities and schedule dates, as well as line item format and designations. The ACO team can make corrections to the MOCAS data base but, there are limitations to the type of corrections the ACO team can make. They are not able to make any corrections that may change the terms of the contract. These corrections are made by the

Purchasing Contract Office (PCO) only. The ACO corrective actions are limited to:

* Section Moves,
* Kind or Type Contract,
* Criticality Designator,
* Defense Priority Assignment System Rating,
* Commodity Code,
* Inspection and Acceptance Code,
* Line Item Numbers,
* National Stock Number,
* Part Number,
* Quantity Variation Overrun or Underrun,
* Unit of Measure,
* Total Quantity on Order, or
* Service Completion Date. [Ref 20]

The ACO team is responsible for ensuring that any corrections or modifications to the contract match the DFAS inputs within the MOCAS database. If they do not, the ACO team either effects the change or forwards the discrepancy to DFAS for correction. [Ref 13]

3. PERFORM CONTRACTOR RISK ASSESSMENT

DCMC determines the extent of production surveillance based on the criticality assigned by the PCO to the supplies

or services (degree of importance to the Government) and several additional factors including:

* Contract requirements for reporting production progress and performance,
* Contractor's production plan,
* Contractor's history of contract performance,
* Contractor's experience with the contract supplies or services,
* Contractor's financial capability, and
* Any supplementary written instructions from the buying activity. [Ref 17:p.42-15]

In order to determine the appropriate surveillance requirements, the IS must examine the risk elements associated with the contract type and the criticality designator identified by the purchasing activity. Presently there are two types of surveillance categories. Both categories require DCMC to administer predelivery surveillance and status. [Ref 21]

Typically, surveillance categories are assigned based on the buying activity's criticality designator. Normally, the Procuring Contracting Office (PCO) will assign a criticality designator of "A" to contracts with Defense Priority System rating of DX (the highest rating), service directed critical programs, or emergencies. A criticality designator of "B" will be assigned to contracts needed to maintain a production or repair line. All other contracts receive a criticality

designator of "C." Contracts that have been assigned a criticality designator of "A" typically receive category 1 surveillance; all other contracts normally receive category 2 surveillance.

Despite this convention, it is still important to conduct a risk assessment of all contract elements and the contractor's assurance and manufacturing processes to ensure the appropriate surveillance code is assigned. A surveillance category should not be prematurely assigned based solely on the criticality designator determined by the PCO.

The first step in determining the contractor's risk elements is to identify the customer's requirements. The IS should review contract elements such as system requirements, schedule, cost controls, and defense priority. It is the responsibility of the IS to examine customer guidance or direction, such as Customer Priority Lists, to clearly understand the customer's needs and expectations (the CPL is a list that requires DCMC to provide the customer with accelerated reporting on status of production due to the sensitive or critical nature of the product or service). [Ref 19:p.21-3]

Next, the IS needs to identify the processes by reviewing whether the contractor's production plans satisfy contract requirements, and evaluating them for adequacy. Processes can

be defined as a series of tasks leading to a common objective that satisfies a requirement, such as making a handle. [Ref 22:p.34] From the contractor's plans and customer requirements, the IS develops a sequence of events chart. This chart identifies pacing events (both contractor and Government) with which to assess progress. Critical processes are identified by considering those processes that are likely to significantly affect contract schedule or cost. [Ref 19:p.21-3] It is important to identify the critical processes in production because they help in assessing the level of contract risk.

To assess the level of risk, the IS considers the contractor's performance history by reviewing relevant Government and contractor data, such as customer input, RDFs, delivery performance history, deviations, waivers, process control data, and process stability. Each critical process will be classified into either low, moderate or high risk.

Low risk involves data that provides confidence in process performance. Low risk processes will only be subject to periodic verification using product audits. Product audits are tests of contractor produced products performed by DCMC Quality Assurance Specialists. These supplement contractor performed tests to assess the contractor's ability to measure

the process effectively by examining products that the contractor has determined to be conforming. [Ref 22:p.34]

If the data available is insufficient to characterize the process as low risk, it will be categorized as medium risk. Product audits will be used to verify critical process outputs until the process or processes are proofed. Process Proofing determines the adequacy of contractor processes by thoroughly reviewing whether the inputs can be expected to achieve the desired outcomes. It includes identifying and flow charting the process sequence, and reviewing process inputs. [Ref 22:p.34] Product Audits are used more intensively in medium risk contracts to ensure that the contractor is providing conforming products. [Ref 19:p.21-3]

High risk category processes involve data which casts doubt on process performance. Process proofing is essential and must be scheduled as soon as possible. Intensive, frequent product audits should be conducted to verify that the contractor is providing the Government with conforming products at high confidence level. [Ref 19:p.21-3]

Although the criticality designator usually determines the surveillance category, it is still important to identify all risk elements so that the appropriate surveillance is provided. Once all risk elements have been categorized, the IS can determine whether the contract warrants category 1 or

2 surveillance. As more critical processes are classified as high risk, more surveillance is justified.

4. DEVELOP TECHNICAL SURVEILLANCE PLAN

Once the level of risk has been determined, the IS develops a written plan to monitor the contractor's critical product assurance and manufacturing processes, establish surveillance points during production, and report production status to the buying activity.

The level of surveillance will depend on the level of risk and the complexity of the contract. In general, the plan identifies contract requirements, critical milestones, major risk areas, pacing events, success or problem indicators, and the buying activity's special interest items. [Ref 23:p.4] At a minimum, all plans should include the following:

* Strategy and tactics for customer input to surveillance planning,
* Critical processes in each risk category,
* Safety of flight aircraft components and systems,
* Surveillance techniques planned for each critical process,
* Process for anticipating delivery delinquencies, and
* Process for production complete actions. [Ref 19:p.21-4]

Most importantly the IS establishes who is responsible for which parts of the surveillance plan. In addition, the IS

ensures that an adequate teaming arrangement and good lines of communication are established between the Government and the contractor.

5. PERFORM PRODUCTION SURVEILLANCE

It is the IS's responsibility to ensure that the surveillance tasks are performed as outlined in the surveillance plan. In particular, the IS must use personal judgment to determine the exact intensity and frequency of product audits. Although the surveillance plan delineates the tasks to be performed, the IS does have some leeway in deciding how to tailor the amount and frequency of production surveillance.

The amount of in-plant surveillance depends on the surveillance category. For category 1 surveillance, the IS conducts monthly follow-on plant visits. The plant visits are conducted in conjunction with pacing events. The IS is responsible for the following actions:

* verify placement of orders and subcontracts,
* observe physical presence of inventory,
* discuss actual or potential problems,
* evaluate corrective actions, and
* develop revised delivery forecasts.

Category 2 surveillance is normally handled by the PT by telephone, as opposed to in-plant visits. The PT telephones

the contractor at the forecasted completion time for each major pacing event. In either case, the IS or PT will gather the necessary information to determine the causes of and impacts from any change in the delivery schedule, including:

* nature of delay,
* length of delay,
* repetition of delay,
* corrective action plan,
* cause for delay Government or contractor,
* need for revision in contractor's plan, and
* need for revision in Government's surveillance plan. [Ref 24]

If this information indicates that the delay will impact the delivery schedule, then an RDF will be initiated.

In addition to the RDF, there is a new system for reporting delays in Government contracts, known as DCMC's ALERTS program. An ALERTS message is also transmitted along with the RDF. The ALERTS system allows for more extensive narrative and more immediate communication between the ACO team and the PCO. The eventual goal is to replace the RDF notification system with the ALERTS system.

Depending on the nature of delay, the IS will identify the appropriate alphanumeric code for the cause and a revised delivery date for the contract line items and quantity affected. These will be reported to the ACO team. The ACO

team will examine the IS's recommendation and decide whether or not to support the recommendation. The RDF will be sent to the PCO with the revised delivery date and the alphanumeric code for delay on the line items affected. The ACO will recommend whether or not contractual options should be undertaken.

Once the PCO decides to continue with production, the IS determines whether or not to adjust the surveillance plan. After this determination has been made, the IS will verify MOCAS data, reassess the risk if necessary, and monitor production and delivery schedules. The IS or PT will continue contract surveillance until another delay in production occurs or the contract is complete.

D. CURRENT CHANGING CULTURAL CLIMATE OF DCMC AND IMPACT ON PRODUCTION SURVEILLANCE

In many contractor facilities, several different processes or specifications may be used for similar manufacturing operations because various military and commercial contracts have different requirements. This approach is inefficient and increases the Government's and contractor's costs and administrative workload. [Ref 25:p.1] In the past, the military required the contractor to conform to set production specifications, such as the MIL Q 9858A standard. This specification was placed in a contract to

incorporate process control as a contractual requirement and ensure that certain Government standards would be met.

In June 1994, the DoD took a major step towards implementing real reform by authorizing commercial specifications and standards. This initiative applied to new contracts only. In December 1995, Paul Kaminiski, the Under Secretary of Defense for Acquisition and Technology, approved the "Single Process Initiative" to incorporate existing contracts into the 1994 initiative. [Ref 26] The Single Process Initiative modifies all existing contracts held by any one contractor as a block, not contract by contract.

These initiatives help eliminate the multiple manufacturing processes imposed on the contractor. By the end of fiscal year 1996, the Government will not use the MIL Q standards; instead they will focus on commercial practices such International Organization for Standardization (ISO) 9000 standards.

ISO 9000 is a set of management standards on quality assurance. There are twelve key elements that incorporate this management based quality system. They include such areas as management responsibility, contract review and process control in production.

Once a contractor receives certification as an ISO 9000 company, DCMC can generate a quality letter of compliance with

ISO 9000 standards. [Ref 12] The contractor can then prepare a proposal to change all their existing contracts with the Government under the umbrella of the "Single Process Initiative." This will circumvent the MIL Q standards imposed by existing contractual clauses.

It is important to note that the quality letter issued by DCMC does not affect the terms of the contract and does not imply automatic product compliance. The letter of quality only indicates that the contractor has a good quality system in place. The ISO 9000 certification process is similar to performing risk analysis for the amount of production surveillance. [Ref 12] Potentially, DCMC may use ISO certifications to determine the degree of Government surveillance and the contractor's ability to self report delays in delivery.

E. CHAPTER SUMMARY

The broad function of production surveillance can consume 40 to 50% of the Contract Administration Team's time. There is more involved than just providing pertinent information to the purchasing activity if there is going to be a delay in delivery. It is important to identify the risks associated with the contractor's processes and tailor the amount of surveillance accordingly.

The next chapter will present data obtained from DCMC and assess the quality of DCMC's production surveillance and the ability of selected contractors to self-report delays in delivery.

IV. DATA PRESENTATION AND ANALYSIS

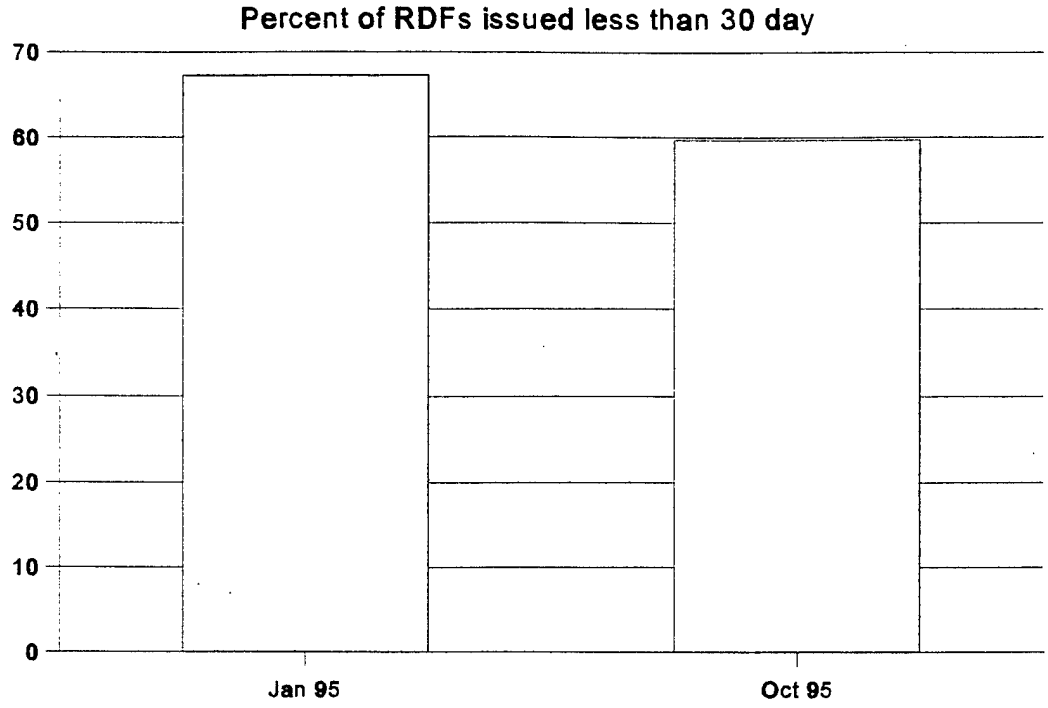
A. INTRODUCTION

To determine the effectiveness of the RDF process, the district level performance and then the administrative office level performance will be described and examined. Data from an administrative office level Contractor Inventory Delinquency Report (CIDR) will also be analyzed. Case studies will be presented on two selected contractors, evaluating their ability to perform some of the contract administrator's work in the contract delivery surveillance process. Finally, the elements of a successful case of PROCAS, an established oversight program, will be assessed.

B. RDF PERFORMANCE

First, the overall performance of RDF coverage in Defense Contract Management Command District West (DCMCDW) at the beginning of the year was compared to that of the end of the year. Figure 2 shows the percentage of RDFs that were issued less than 30 days in advance. Figure 3 represents the remaining are RDFs that were issued more than 30 days in

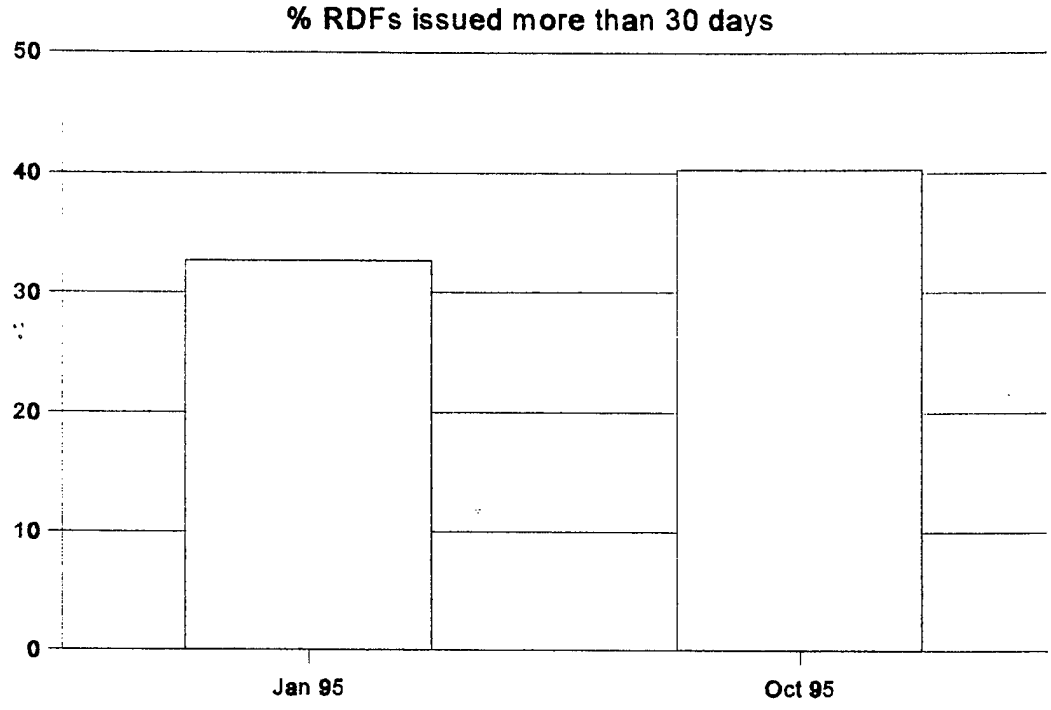
Figure 2.



advance. The goal of DCMCDW is to issue RDFs more than 30 days in advance to the buying activity.

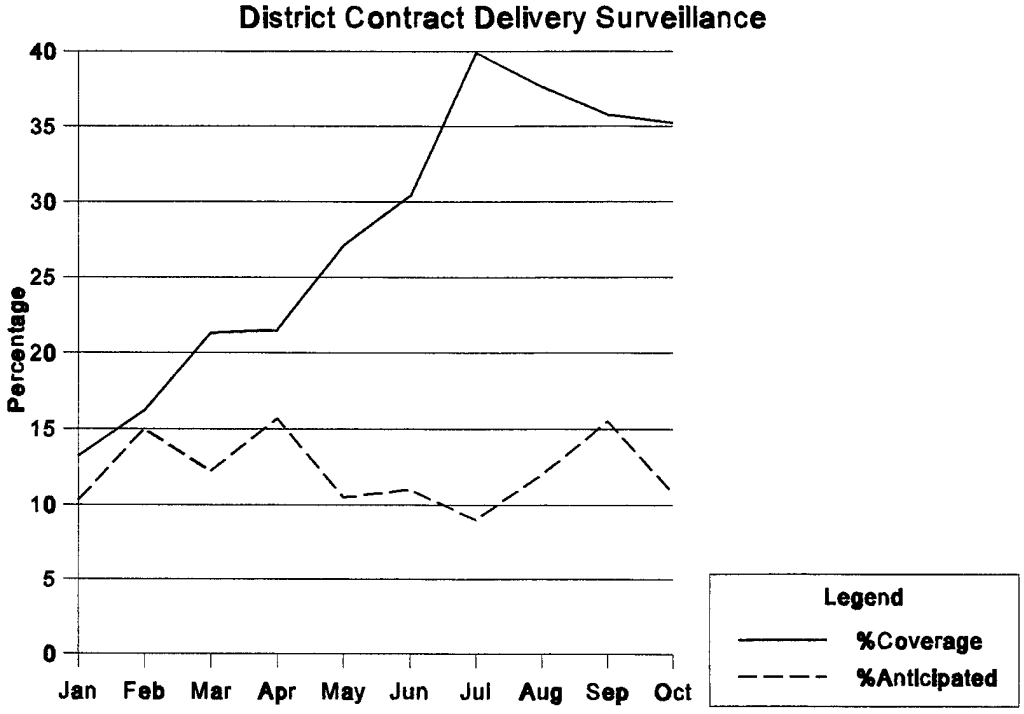
Figure 2 shows an overall 7% decrease in RDFs that were issued less than 30 days in advance. Figure 3 shows an 8% increase in advance warning to the customer from the beginning of the year for the district level as a whole. The above trend indicates that emphasis is being placed on notifying the customer with more advance warning.

Figure 3.



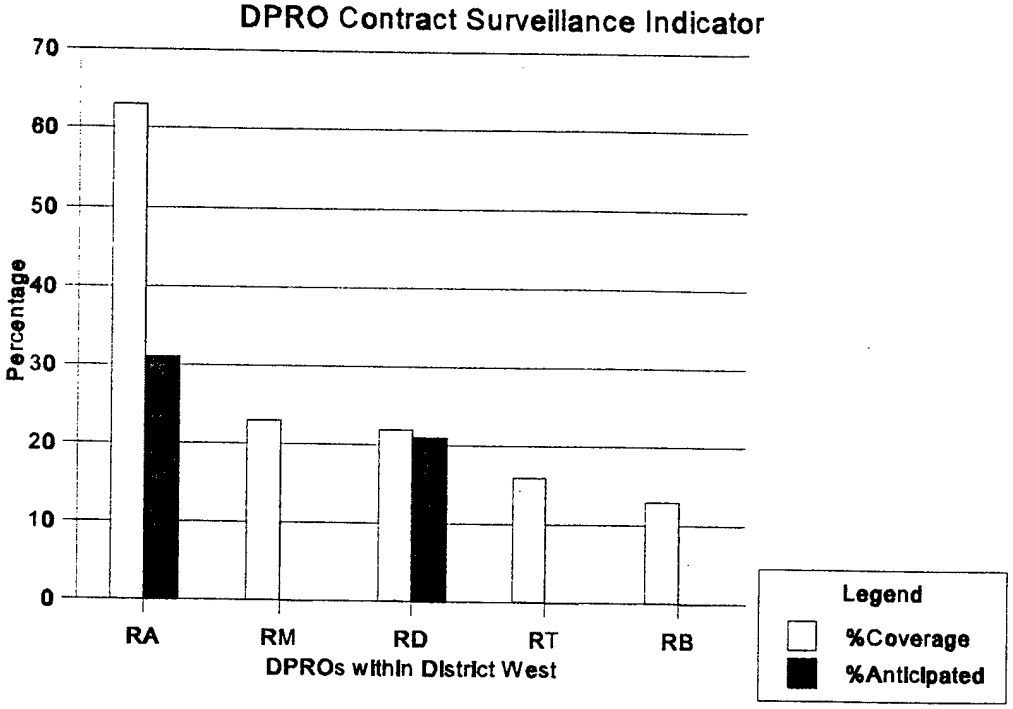
Next, the RDFs issued from January to October 1995, versus delinquent schedules not reported, were compiled for the district. Figure 4 depicts the percent RDF coverage versus the percent anticipated RDF coverage. Coverage involves dividing the quantity of delinquent schedules that were preceded by a current RDF by the total quantity of delinquent schedules. Anticipated coverage involves the portion of RDFs that were issued more than 30 days in advance divided by the total amount of delinquent schedules. DCMCDW set a goal that

Figure 4.



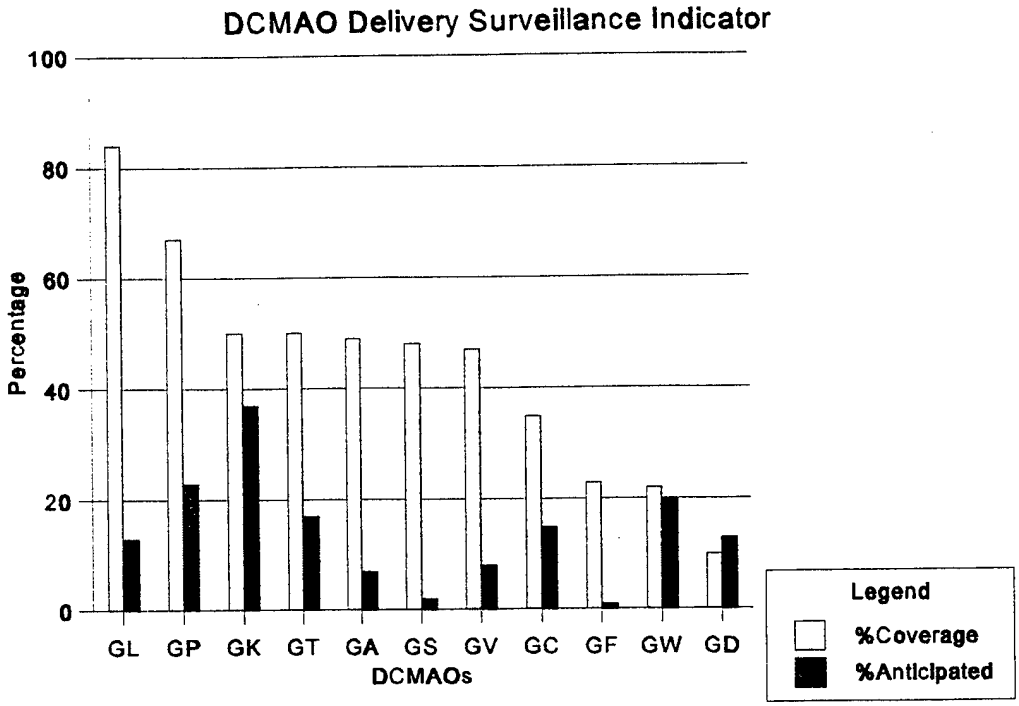
coverage should at least encompass 60% of all delinquent contracts; anticipated should include 30% of all delinquent contracts. These goals were not met in 1995. The district intends to provide 100% anticipated coverage to its customers, but manpower constraints make this infeasible.

Figure 5.



Next, contract delivery surveillance was tabulated according to the number of RDFs that were issued by each DPRO in DCMCDW (Figure 5). By the end of the fiscal year, only one DPRO had attained the metric levels set forth by the district: coverage of 60% and anticipated of 30%. The other four DPROs did not achieve the metrics. Three of the DPROs did not issue any RDFs more than 30 days in advance.

Figure 6.

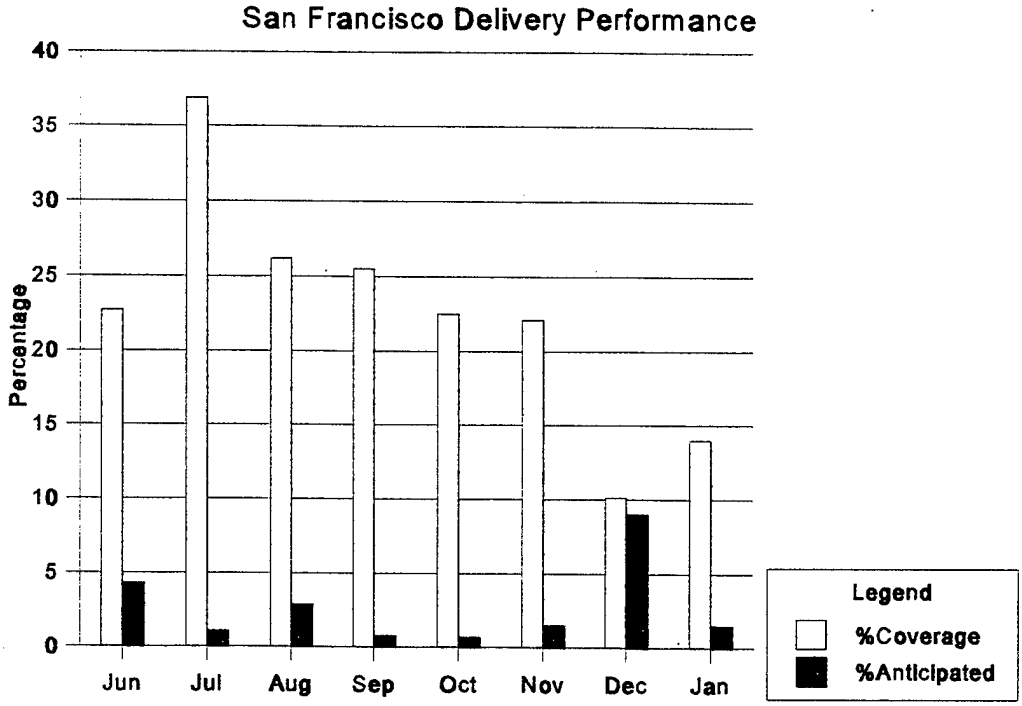


The DCMAO's RDF performance for DCMCDW was also recorded (Figure 6). Two of the DCMAOs were able to attain the 60% district goal for overall RDF coverage. The other nine area offices did not accomplish this goal. Only one area office was able to meet the established 30% goal for anticipated RDFs. Some districts were able to accomplish reasonable to modest results for overall coverage, but were more sporadic in issuing RDFs more than 30 days in advance.

RDF performance was examined further at the administrative office located in San Francisco (Figure 7). At

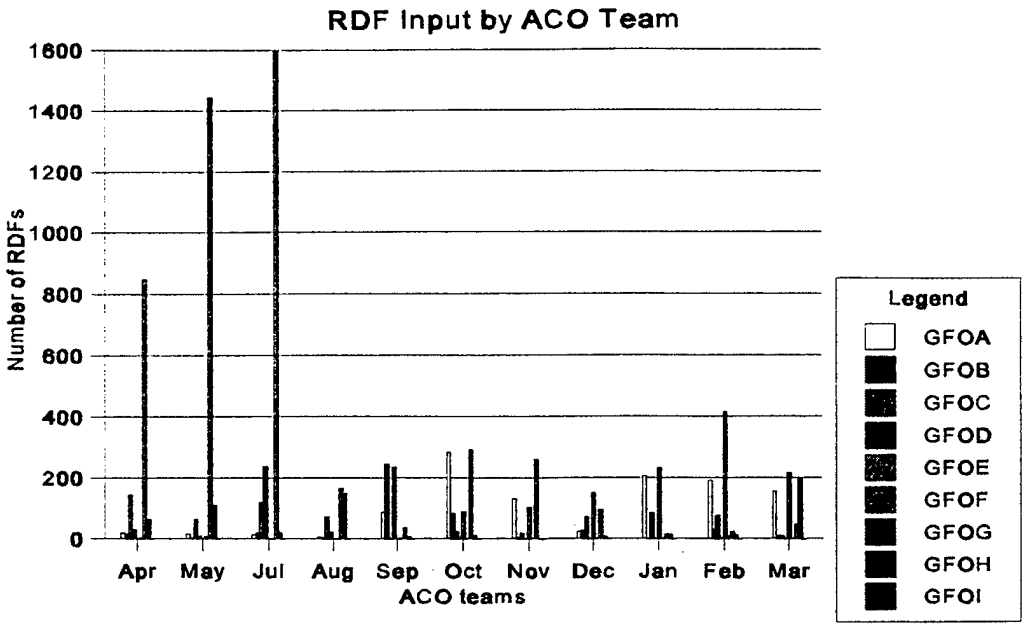
the San Francisco Area Office, the coverage and anticipated coverage were well below the district goals for the year. Comparing the number of RDFs issued to delinquent schedules, customer notification was below district goals.

Figure 7.



San Francisco's RDF input was further examined by each contract administration team (Figure 8). Again the amount of RDF input varied between teams and even within teams. Some months more RDFs were issued than others. Some teams fluctuated greatly in RDFs that they were issuing.

Figure 8.



There are apparently some problems with the RDF process. The RDF gives advance warning to the customer. Figure 2 revealed that at the beginning of 1995 the majority of RDFs being issued by DCMCDW were less than 30 days in advance. Towards the end of the year, more emphasis was placed on notifying the customer sooner. The total percentage of RDFs that were issued more than 30 days in advance grew from 32 to 40%. Therefore, it appears that DCMCDW is focusing on being more proactive with the RDF process.

As mentioned before, there are some problems with the RDF process. The reason why RDFs are issued in less than 30 days

is sometimes due to the working relationships between the Government and the contractor. The contractor would rather say that everything is on schedule and that the delivery date will be met than come forward early and have to explain why they won't meet the schedule. [Ref 27]

Another problem that prevents the issuance of RDFs is the contract administration team's failure to identify critical manufacturing processes. If the contract administration team is unable to identify the contractor's critical manufacturing processes, they will be unable to anticipate problems that may prevent on time product delivery. Part of this problem is training. DCMC does not hold supervisors responsible for reviewing and proofing the contractor's processes. [Ref 22:p.8] Prior to implementing contractor self-oversight programs, such as PROCAS, many of the contract administrators only inspected the end result or product.

Perhaps the biggest reason for RDFs being issued with little or no notice is insufficient Government personnel resources. Manpower constraints limit the amount of production surveillance that is performed. This in turn impacts the RDF process. Manpower limitations are often the cause for not detecting delays a month in advance. The area offices sometimes experience declining effective manpower as they gain responsibility for more contracts, often of smaller

scope and proportion, without the luxury of being located within the contractor's facility. As a result, some customers believe that small dollar contracts get little or no attention. [Ref 28:p.29] Many customers are concerned about DCMC resources and support to their organizations. Concerns include insufficient resources, high turnover, constant reorganization, and general instability of the DCMC work force. [Ref 28:p.25]

Despite DCMC manpower limitations, some DPROs and some area offices have a better record of issuing RDFs. This depends on the priorities and manpower capabilities of the organization at the time. One area office located in Phoenix has increased their RDF submissions by opening the RDF process up to a wider range of contract administration team members. RDFs are typically submitted by Industrial Specialists (IS) and Procurement Technicians (PT). These often make up only 11% of the contract administration team. When other members of the team were trained to submit RDFs, they increased significantly.

On the other hand, as the numbers of ISs and engineers dwindle, other contract administrators are being pushed into performing their responsibilities other than RDF initiation. Unfortunately, these DCMC personnel do not always understand manufacturing processes like the IS or engineer. As a result,

these contract administrators have to do on the job training. This requires a dedicated person, especially if they do not receive much guidance from their supervisor. This can cause RDFs to be issued with little notice or to be totally omitted.

There is a data problem that indicates RDF non-compliance may be overstated. There are a number of contracts that appear to be delinquent without any notification to the buying activity. However, a large number of contracts still indicate being open in the MOCAS system when they have already been completed. These contracts need to be moved to MOCAS's closed contract section.

The coverage and anticipated percentages are skewed as shown in Figure 4. The main reason this occurs is due to manpower and training. There are limited resources and often administrative tasks are delayed to perform higher priority tasks. This affects the DCMC's RDF coverage to the customer. At one area office alone, there are some 3500 contract line items, but only about 1000 of these are current contracts. [Ref 29]

Although these completed contracts account for some of the RDF failures, there still is a problem with insufficient manning levels to initiate the RDF process. Recently, all category 3 surveillance contracts have been upgraded to surveillance 2 contracts. This requires predelivery

surveillance. In the past, category 3 contracts had not required predelivery surveillance. Thus, the workload for the contract administrator has increased while the work force has diminished.

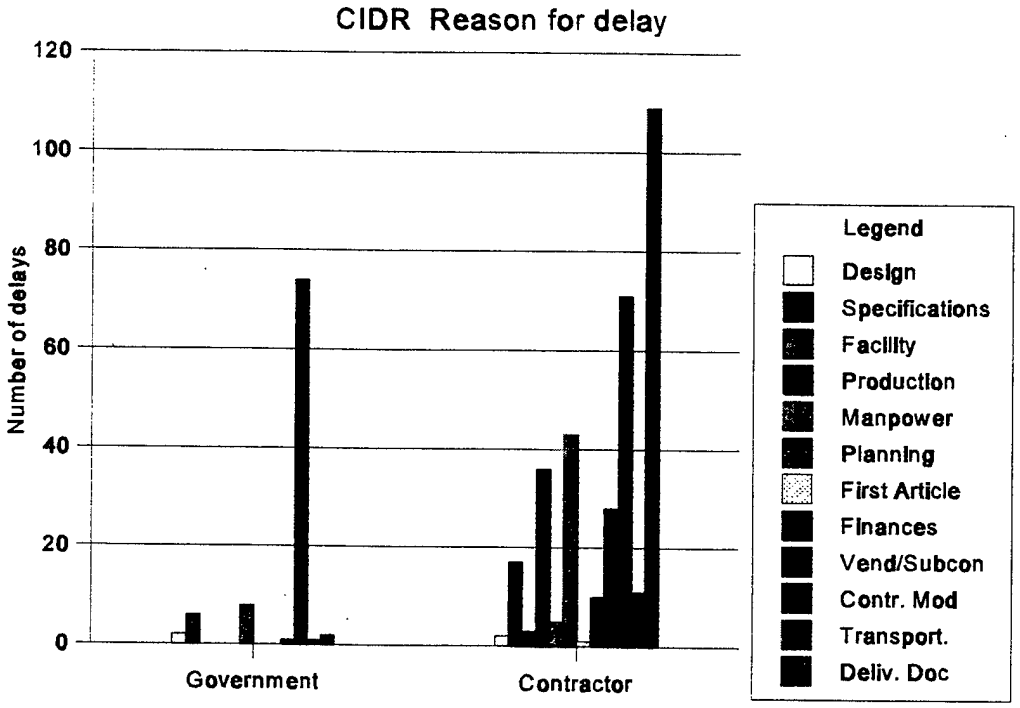
The DPRO coverage, as represented in Figure 5, was not in accordance with the district metrics of 60%. Although there are contract administrators on the site, that does not mean that there is a cooperative atmosphere with the Government. In addition, other priorities may take higher precedence over an RDF notification. If the contract administrative team members are not held responsible for RDF initiations by the managers, they tend to focus on other tasks.

C. CIDR EVALUATION

The Contractor Inventory Delivery Report (CIDR) is a valuable tool for the contract administration team to tabulate the reasons for delays. It is extremely important to know what are the typical causes of delay and whether the Government or contractor was the cause.

Figure 9 represents data from a CIDR taken from an area office located in DCMCDW. This CIDR represents the general trends in the reasons and the responsible party for the delay. [Ref 30] According to the report, the Government was

Figure 9.



responsible for 20% of the delays and contractors were responsible for 80%.

The biggest reasons for delay centered around production, planning, contract modifications and delivery. The Government's biggest problem was contract modifications.

However, the contractors were responsible for an almost equal number of contract modification problems.

The majority of contractor delays involved design, planning, production, finances, vendor or subcontractor unreliability, contract modifications, and shipping. All these problems revolved around processes that affect manufacturing. The contractor has the ability to anticipate most of these problems more quickly than the Government.

Unfortunately, communications between the Government and the contractor are often adversarial. The contractor may know that a problem exists but does not want to notify the Government until the schedule is definitely compromised.

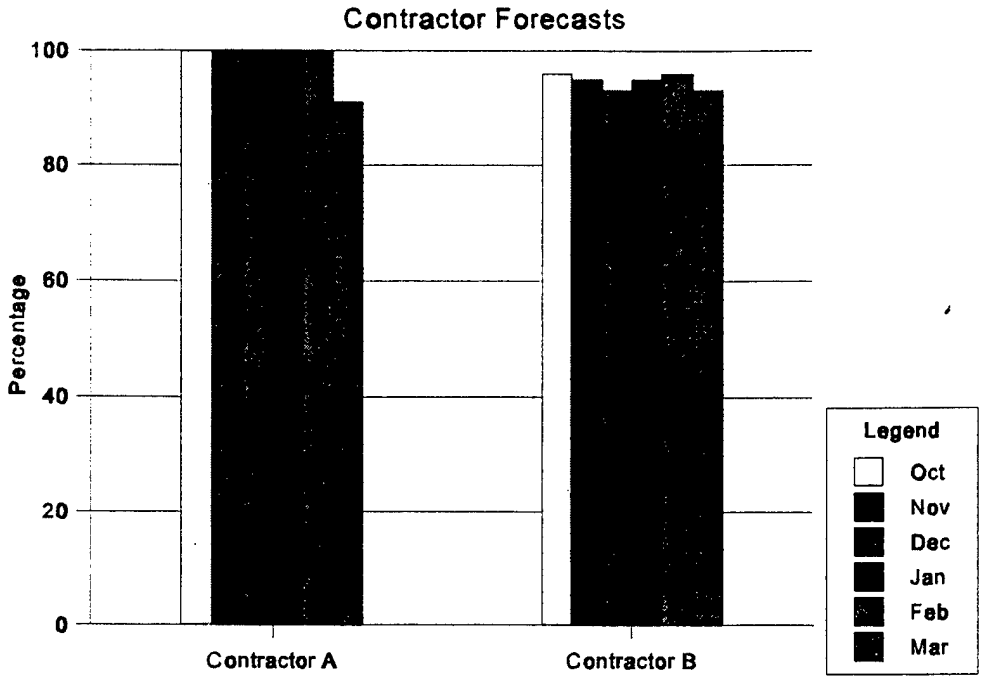
It is not hard to train contract administrators to do an RDF; the problem exists with knowing how to identify potential problems in the contractor's processes that could cause potential delays down the line. Many times, the contract administrators cannot perform their responsibilities. They cannot make suggestions to the contractor on how to improve his processes, whether they be financial, production or material control, because they do not have the experience. Basically, the Government does not always pay enough to retain specialized personnel and will often lose these personnel to the private sector. [Ref 27]

D. CONTRACTOR FORECASTING

Since the contractor is often aware of production problems before the Government, some contractors were selected to forecast their own delivery schedules. Contractors were selected by the area office. First, the contractor had to be a willing participant along with the buying activity. In addition, since a contractor may hold several contracts with the Government, the area office, the contractor, and the buying activity had to agree on the contracts to include in the self-reporting of delivery delinquencies. Finally, the area office was responsible for establishing a reporting procedure method which assures:

* processing RDFs in a timely manner,
* updating MOCAS,
* random sampling of contractor data for accuracy, and
* monitoring accuracy and when forecasts reach 90% accuracy for at least three consecutive month removing routine oversight from contractor's plant. [Ref 31]

Figure 10.



1. CONTRACTOR A CASE STUDY

Contractor A has been a contractor with the Government for several years. The contractor has four major programs with the Government. Three of the programs are shop type operations in which only one or two high cost, specialized items are produced at one time. The fourth program involves a production line set up to produce several contract line items. The majority of the contracts held with the Government are Firm Fixed Price.

Contractor A has a large facility to support the various programs and product lines. Since Government contracts are becoming less and less consistent, the work force is not always stable. The contractor's stock of raw materials supports about 80% of the contract delivery schedule.

Each program has different requirements and different internal control systems. Three of the programs involve interaction between purchasing and material control. Due to the one time nature of the fourth program, the contractor did not want to set up an internal control system between purchasing and material control.

The surveillance plan for each program is adjusted accordingly if a delay in production effects a pacing event. This happens only with the PCO's (buying activity) approval. The contractor conducts weekly meetings and monthly reviews for each of its programs to ensure that the programmed milestones in the contract are being met.

Before the contractor started to self-forecast delays, the IS was responsible for reviewing and releasing RDFs. The PT performed production surveillance unless a problem occurred, then the IS assisted in the surveillance.

During the contractor self-forecasting period, the Contract Administrator would send a copy of the 30/60 day

report to the contractor a month in advance. This was done to highlight the contract line items that would be coming due within the next two months. The contractor would fax back a status report on all the delivery schedules and any reasons for delinquencies. The Contract Administrator would schedule meetings with the contractor if there was a problem.

For a six month period, the contractor was over 90% accurate with forecasts (Figure 10). However, there was a problem with one of the high visibility programs during the last month. Unfortunately, the contractor waited until it was too late to notify the Government that it was not going to meet its commitment. These contract line items were critical to the Government.

After discussion with the Industrial Specialist on the contract administration team, this contractor was rated as good but not outstanding. The IS felt that this contractor maintained a good working relationship with the Government but that they were not always forthcoming with details on their work in each program. The problem with this contractor is that not all programs had good internal control systems for all facets of the program operations from finance to production. In addition, this contractor had some problems with their subcontractors.

The contract administrators are "pushing" this contractor now. If Government oversight is removed, what incentive does the contractor have to keep on schedule? One of the IS's suggestions for an incentive to motivate the contractor is to include a monetary award in a contract clause if the contractor successfully participates in the self-oversight of potential delinquent deliveries.

The IS also commented that if the contractor self-oversight program was initiated, the Government should do more front end analysis of the contractor's internal control system. The contractor should have an established internal control system which adequately addresses costs, reliability, and producibility. In addition, a regular management review of the system should also be in place. Most importantly, the Government needs to ensure that the contractor meets the contractual requirements, satisfies the customer's needs, establishes good lines of responsibility and communication, and focuses on problem prevention.

2. CONTRACTOR B CASE STUDY

Contractor B has been working with the Government for over 20 years and presently holds over 120 Government contracts. This contractor supplies spares for various aircraft platforms. Sometimes they perform subcontractor work for other contractors on major Government programs. The

majority of contracts held with the Government are Firm Fixed Price.

Contractor B has a large facility to support all the various Government contracts. In addition, they have a very stable work force. The biggest problem that contractor B faces is with its vendors. The most frequent reason for delay is late supplies and material from vendors.

According to the Technical Specialist on the contract administration team responsible for contractor B, the contractor has a total quality system in place for all aspects of its operations. Everything from contract review to financial accounting is quality driven. Presently, this contractor is going through the process of receiving its ISO 9000 certification.

Two years ago, the contractor had a delinquency rate of 42%. With the help of the technical specialist, they developed a procedure for self-reporting delays. The contractor created a system that monitored all outstanding contracts and subsequently pulled up all contract line items that were coming due, 60 days in advance. The contractor also established a fail safe date by which the product needed to be ready. This was fifteen days prior to the required date set by the Government.

The Technical Specialist also noted communication problems between management and the people on the "floor." Many times a product was ready to ship, but the workers on the floor did not know when to ship it. With the help of the Technical Specialist, the contractor developed a contract flow down program to make both management and the people on the production floor aware of contractual commitments. [Ref 32] As a result, the contractor's delinquency rate was reduced to 2% and their forecasting abilities were above 90% each month (Figure 10).

Contractor B maintains a good working relationship with the Government. According to the Technical Specialist, communication is the key to success. Communication helped transform a good contractor to an outstanding contractor. Both sides were willing to listen and incorporate suggestions for improvement.

Although contractor A had a slightly better record of forecasting, they did not instill the same trust in the contract administration team as did contractor B. Contractor B was proactive and more forthcoming with problems. Contractor B had a total quality internal control system for each and every program or contract held with the Government. Conversely, contractor A did not invest in a quality control system for each of its programs. One program was a one time

contract, so the contractor was not interested in having an internal control system to monitor the program. As a result, this program has had problems with maintaining its production schedule. [Ref 32]

The contractor's past forecasting record alone is insufficient to accept the contractor into a self-reporting program. Other considerations should be made, such as what type of internal control system is in place, before participation in a Government self-oversight program is allowed.

E. PROCAS CASE STUDY

In April 1992, Magnavox Electronic Systems Company, Indianapolis, Indiana was selected as a pilot site for PROCAS implementation. At the time, 80% of Magnavox's contracts with the Government were Firm Fixed Price and the remaining 20% were Cost Plus Incentive Fee. Prior to their selection for the program, Magnavox experienced problems in delivering their products. They were placed in the Contractor Improvement Program (CIP) in 1988. In 1989, the president of Magnavox changed the organization's philosophy to one of empowerment, team work, and continuous improvement. The president also established a strong ethics program. This was one of the keys to their success later in the PROCAS program. [Ref 33]

With their change in business philosophy, they were selected to participate in the PROCAS program. Since implementation, contract delinquency rates were reduced from 17.65 percent to 2.3 percent in September 1995. In addition, their on-time delivery rate increased from 14 percent in 1989 to 97 percent in 1995. [Ref 4:p.72]

Although there are many PROCAS success stories, there have been just as many failures. An audit report conducted by the Inspector General claimed that DCMC did not effectively manage the quality assurance work force at 13 sites. The DCMC personnel did not effectively implement the PROCAS program at these sites. The problems identified at these sites were as follows:

* DCMC did not adequately prioritize the need to identify critical manufacturing processes for PROCAS,
* DCMC did not hold their personnel responsible for implementation of PROCAS, and
* DCMC did not hold supervisors responsible for reviewing and evaluating the identification of, and proofing of processes.

Consequently, PROCAS implementation at these sites did not ensure that the Government was accepting products produced with reliable processes that would produce a conforming product. [Ref 22:p.8]

What did Magnavox have that was absent at these other sites? Why did they succeed while other failed? A number of

factors contributed to the successful implementation of PROCAS at Magnavox:

* Support and commitment from internal top management,
* Support from superiors outside the organization,
* Tailoring the program to the organization's needs,
* Training workers and management,
* Information sharing between the organization and the Government,
* Shared goals between the organization and the Government,
* Preexisting total quality environment,
* Caliber of the work force,
* Recognition of achievements,
* Empowerment of the work force,
* Cross functional teaming, and
* Creation of a positive environment. [Ref 4:pp.78-80]

F. CHAPTER SUMMARY

With dwindling resources, Government oversight capabilities are becoming less and less flexible. The Government must tailor the amount of oversight based on the level of risk associated with a contractor's operations. As indicated previously with the Government's performance in issuing RDFs, the personnel resources do not exist to provide complete contract delivery surveillance to all contractors.

Self-oversight programs are one solution to the diminishing resources that the Government possesses, but they should not be blindly implemented. As viewed earlier with contractor A, a contractor can be in compliance with forecasting delivery schedules, but compliance is only superficial if there is no type of internal control mechanism to flag problems in production.

We suggest that there is no set formula to determine oversight requirements. DCMC must tailor their oversight activities and consider all variables for each situation. Risk assessment is very important and more time needs to be devoted to this area of predelivery surveillance.

V. CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY

The world in which the DoD must operate has changed dramatically within the last ten years. All DoD activities have had to either compete fiercely for scarce resources or develop alternative means of conducting operations. Budget and personnel constraints have prompted DCMC to investigate all measures which can improve the efficiency and effectiveness of DoD's defense contractor oversight. Ultimately, it is essential to formulate programs that identify those contractors where not only the risk associated with reducing, disengaging or redesigning Government oversight is low, but where the Government's end product will still be of high quality and delivered in a timely fashion.

As late as September 1994, a DoD Inspector General (IG) report found that DCMC lacked an effective process for determining manpower requirements in the oversight process. [Ref 5:p.5-4] In addition, the IG team found little documented evidence that the customer's essential needs or the adequacy of contractor controls influenced decisions on how to deploy limited personnel resources. They concluded that the intensity of oversight is not necessarily driven by changes in risk, but by available manpower. [Ref 5:p.5-4] The team also

recommended that DCMC develop a risk assessment methodology to determine oversight requirements.

In 1995, DCMC's new instruction manual, entitled the "One Book," presented a methodology for performing contractor risk assessment. This contractor risk assessment methodology for determining Government oversight was previously discussed in chapter three. Although DCMC has developed a risk assessment methodology, each DCMAO and DPRO must implement it in a way that considers all of the variables for each contract. There is no guarantee that the personnel resources needed to perform risk assessment will be readily available at each DCMAO or DPRO.

As mentioned previously, DCMC is eliminating military standards for manufacturing processes in favor of commercial standards. With the "Single Process Initiative," contractors can modify existing contracts which contain MIL Q standards. Although this initiative might provide substantial cost savings for contractors using both military and commercial standards in their manufacturing processes, it may initially cause problems for the contract administration team members. When performing risk assessment, they may not be familiar with commercial standards, such as ISO 9000.

As previously viewed with the RDF performance, 100% contract delivery surveillance is not being provided to the

customer. Part of the problem is that all contracts now require predelivery surveillance. This places an extra burden on DCMC personnel; the work load has increased without a similar increase in the work force. Although manpower constraints limit DCMC's ability to perform contract delivery surveillance, contractor self-oversight programs, such as self-reporting delays, should not be blindly embraced as the panacea to contract delivery surveillance problems. There should be criteria established to participate in such a program.

In the past, programs such as PROCAS have had their successes and failures. Successes, as viewed with Magnavox, were due in part to top commitment in management from both the contractor and the Government, mutual trust, open lines of communication, and empowerment to personnel within the lower rungs of the organization. [Ref 33] The bottom line is that personnel resources are dwindling at DCMC and unfortunately the time available for oversight can quickly become the amount of oversight applied.

B. CONCLUSIONS

DCMC's newest initiative of contractor self-oversight, self-reporting delivery delays has the potential to be an effective method for tailoring oversight. Although DCMC is still collecting forecasting data from participating DCMAOs

and DPROs, the two case studies previously presented provide a foundation for potential characteristics when selecting participants for this program. Contractors should meet certain criteria to participate in a self-oversight, self-reporting program.

The two case studies indicate that more must be involved in selecting participants for the initiative than just a 90% or better forecasting ability for at least three consecutive months. As seen with contractor A, the contractor could initially be in compliance with delivery forecasts. However, if there is no internal control mechanism for flagging problems in production, material control, etc., forecasting performance can decline rapidly when operations fail to run smoothly.

As seen with the two case studies and the successful PROCAS example, a number of factors can be identified that would increase the probability of success for any self-oversight initiative:

* Support and commitment from internal top management,
* Support from external stakeholders,
* Tailoring of oversight to the organization,
* Communication of information throughout the whole organization and with the Government, and
* Empowerment of the work force. [Ref 4:pp.78-79]

It is important to note, however, that even if the contractor exhibits the qualities listed above, it may not be advisable to adopt a self-oversight program. Customer requirements or safety concerns may justify full oversight, even if contractor performance and program history are assessed as low risk (i.e. National Aeronautics and Space Administration (NASA), the Navy Nuclear Propulsion Program, etc.). [Ref 5:p.5-5]

The potential for successful contractor self-oversight and self-reporting of delivery delays lays with the risk assessment performed by the contract administration team. If the Government focuses on performing this portion of the contract delivery surveillance process well, it will reduce the risk of allowing contractor participation in a self-reporting program. There are several existing Government programs for identifying quality contractors. These programs can assist in the risk assessment process. The include, but are not limited to:

* Malcolm Baldridge National Quality Award Assessment,

* Quality Products and Qualified Manufacturers List, and

* Past performance information (customer and internal audits).

There are also some certifications, such as ISO 9000, that should be considered when determining a contractor's

capability for contract compliance. These reviews and certifications should not replace Government risk assessment, but supplement the process. [Ref 5:p.5-10] As mentioned previously in chapter four, the majority of Government contracts held in each case study was Firm Fixed Price. If delivery is an issue, designing contracts which promote an environment conducive to self-reporting may be an option worth investigating. Contract types such as Fixed Price Award Fee or Fixed Price Incentive Fee allow for an award fee pool of dollars that will reward a contractor for delivering ahead of schedule or reporting any delays accurately.

C. RECOMMENDATIONS

DCMC should continue its commitment to contractor self-oversight and self-reporting of delivery delays. To further determine the feasibility of this program, the following recommendations for study are provided:

* Perform cost benefit analysis of the monetary effectiveness of the program as more cost data becomes available,
* Analyze the effectiveness of the ALERTS method for reporting delays in deliveries as more data becomes available, and
* As more companies receive ISO 9000 certifications, determine if less risk assessment needs to be performed.

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